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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,240	03/05/2002	Matthew Shair	2001180-0051 (HU) 11588-98	7192

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Choate, Hall & Stewart
Exchange Place
53 State Street
Boston, MA 02109

EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 04/21/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/091,240

Applicant(s)

SHAIR ET AL.

Examiner

My-Chau T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-47 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claim 1, drawn to a method of identifying small molecules, classified in class 436, subclass 2.
 - II. Claims 2-33, drawn to a method of identifying a test compound, classified in class 435, subclass 4.
 - III. Claims 34-35, drawn to a library of test compounds attached to a solid support, classified in class 436, subclass 518.
 - IV. Claim 36, drawn to a method of synthesizing a combinatorial library, classified in class 435, subclass 3.
 - V. Claim 37, drawn to a method of providing a molecular sensor, classified in class 436, subclass 56.
 - VI. Claims 38-39, drawn to an assay system comprising a nitric oxide synthase gene, classified in class 436, subclass 106.
 - VII. Claims 40-46, drawn to an assay system, classified in class 435, subclass 6.
 - VIII. Claim 47, drawn to a method of synthesizing and assaying a library of small molecules, classified in class 435, subclass 7.8.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups I, II, IV, V, and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different

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modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01).

In the instant case the different inventions as claimed have different method steps that have different functions and effects.

The method step of providing a collection of small molecules wherein each of which is attached to a solid support of Group I is not required by the claims of Groups II, IV, V, and VIII. The method step of identifying test compounds which promote or inhibit a biological event of Group II is not required by the claims of Groups I, IV, V, and VIII. The method step of attaching tags to the solid support which encode the synthesis or structural elements of Group IV is not required by the claims of Groups I, II, V, and VIII. The method step of providing a collection of chemical compounds linked to a solid support of Group V is not required by the claims of Groups I, II, IV, and VIII. The method step of providing cells containing a DNA sequence encoding a nitric oxide synthase of Group VIII is not required by the claims of Groups I, II, IV, and V.

3. Inventions of Groups III, VI, and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions as claimed have different required components that have different functions, effects, and modes of operation.

The feature of a library of test compounds attached to a solid support of Group III is not required by the claims of Groups VI and VII. The feature of a nitric oxide synthase gene of Group VI is not required by the claims of Groups III and VII. The feature of a first construct

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encoding a DNA binding domain of Group VII is not required by the claims of Groups III and VI.

4. Inventions Group III (apparatus) and Group I (process) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process.

(MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such the method of Group II or the method of drug screening. This restriction requirement is also applicable with the apparatus of Groups VI and VII.

5. Inventions Group III (apparatus) and Group II (process) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process.

(MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such the method of Group I or the method of drug screening. This restriction requirement is also applicable with the apparatus of Groups VI and VII.

6. Inventions Group III (apparatus) and Group II (process) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2)

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the apparatus as claimed can be used to practice another and materially different process.

(MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such the method of Group II or the method of drug screening. This restriction requirement is also applicable with the apparatus of Groups VI and VII.

7. Inventions Group III (product) and Group IV (process of making) are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as “ink-jet” printing or the method of Group V. This restriction requirement is also applicable with the product of Groups VI and VII.

8. Inventions Group III (product) and Group V (process of making) are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as “ink-jet” printing or the method of Group IV. This restriction requirement is also applicable with the product of Groups VI and VII.

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9. Because these inventions are distinct for the reasons given above and the searches required are not co-extensive thus requiring a burdensome search, restriction for examination purposes as indicated is proper. Additionally, different patentability considerations are involved for each group. For example, a patentability determination for Group III would involve a determination of the patentability of the combination of a library of test compounds attached to a solid support while a patentability determination for Group V would involve a consideration of the patentability of the method of providing a molecular sensor. These considerations are very different in nature.

10. This application contains claims directed to the following patentably distinct species of the claimed invention:

11. If applicants elect the invention of **Group I (Claim 1)**, applicants are required to further elect *one* species from *each* group below:

- a. A small molecule.
- b. Molecular sensor.
- c. Reporter gene.
- d. Chemical sensor.

The species are distinct, each from the other, because their structures and/or modes of action are different.

Applicant is advised that a reply to this requirement must include an identification of the single specific species of small molecules and its point of attachment to the solid support,

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molecular sensor, and chemical sensor; and a listing of all claims readable thereon, including any claims subsequently added.

12. If applicants elect the invention of **Group II (Claims 2-33)**, applicants are required to further elect *one* species from *each* group below:

- a. Test compound.
- b. Molecular sensor.
- c. Decoding tag.
- d. Inducible reporter gene.
- e. Reporter gene product.
- f. Chemical compound.
- g. Cell.
- h. Solid support.

The species are distinct, each from the other, because their structures and/or modes of action are different.

Applicant is advised that a reply to this requirement must include an identification of the single specific species of test compound and its point of attachment to the solid support, molecular sensor, and decoding tag; an identification of the single specific species of cell and its point of attachment to the inducible reporter gene, reporter gene product, and chemical compound; and a listing of all claims readable thereon, including any claims subsequently added.

13. If applicants elect the invention of **Group IV (Claim 36)**, applicants are required to further elect *one* species from *each* group below:

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- a. A small molecule.
- b. Molecular sensor.
- c. Tag.

The species are distinct, each from the other, because their structures and/or modes of action are different.

Applicant is advised that a reply to this requirement must include an identification of the single specific species of small molecules and its point of attachment to the solid support, molecular sensor, and tag; and a listing of all claims readable thereon, including any claims subsequently added.

14. If applicants elect the invention of **Group V (Claim 37)**, applicants are required to further elect *one* species from *each* group below:

- a. A chemical compound.
- b. Molecular sensor.

The species are distinct, each from the other, because their structures and/or modes of action are different.

Applicant is advised that a reply to this requirement must include an identification of the single specific species of chemical compound and its point of attachment to the solid support, and molecular; and a listing of all claims readable thereon, including any claims subsequently added.

15. If applicants elect the invention of **Group VII (Claims 40-46)**, applicants are required to further elect *one* species from *each* group below:

- a. DNA binding domain.

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b. Activation domain.

c. First protein.

d. Second protein.

e. Reporter gene.

The species are distinct, each from the other, because their structures and/or modes of action are different.

Applicant is advised that a reply to this requirement must include an identification of the single specific species of DNA binding domain and its point of attachment to the first protein, second protein, activation domain, and reporter gene; and a listing of all claims readable thereon, including any claims subsequently added.

16. If applicants elect the invention of **Group I (Claim 1)**, applicants are required to further elect *one* species from *each* group below:

a. A small molecule.

b. Encoding tag.

c. Molecular sensor.

d. Cell.

The species are distinct, each from the other, because their structures and/or modes of action are different.

Applicant is advised that a reply to this requirement must include an identification of the single specific species of small molecules and its point of attachment to the solid support, molecular sensor, and encoding tag; and a listing of all claims readable thereon, including any claims subsequently added.

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17. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

18. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

19. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

20. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

21. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

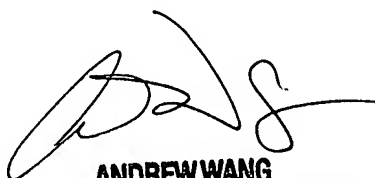
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Chau T. Tran whose telephone number is 703-305-6999. The examiner is on ***Increased Flex Schedule*** and can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang can be reached on 703-306-3217. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1123.

mct
April 20, 2003



ANDREW WANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600